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ABSTRACT

This paper explores perspectives on self-study in teaching and in research through a longitudinal school-based professional development program for science teachers. The exploration focused on two broad perspectives: (1) self-study can be both personal and collaborative; and (2) self-study can be of teaching and of research. The professional development program in a large independent school in Melbourne (Australia) was initiated by a science faculty, who invited a tertiary educator to work with them in their classes to help them improve their pedagogy. Self-study was a valuable learning tool for individual teachers as learning from experience directly impacted on their own actions. From collaborative self-study, teachers began to learn from one another, began to take appropriate risks, and began to reconsider individual and "faculty directed" practice. Self-study of research was also explored as an individual and as a shared activity. The dual role of teacher and researcher in the professional development program allowed opportunities for interaction and for refining the skills of classroom observation, discussion, and debriefing, and the opportunity to research the development of teachers' pedagogies over time from a participant observer's perspective and as a collaborative researcher. (ND)

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Self-study in teaching and research

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Introduction

The "self" in self-study is often portrayed as a personal perspective on one's own thoughts and actions. However, such a view unintentionally limits the possibilities of learning from and through practice to the individual and is therefore somewhat constraining. In this paper we will explore perspectives on self-study as developed through a longitudinal school based professional development program for science teachers. This exploration will focus on two broad perspectives: (i) self-study can be both personal and collaborative; (ii) self-study can be of teaching and of research. The first perspective is seen as including the second.

A school based professional development program was undertaken by the first author of this paper. In this program self-study was important as a catalyst for learning through teaching and research, as both the teachers and the researchers (the authors of this paper) have come to new understandings of their practice. Therefore, we suggest that in many ways, self-study is synonymous with reflection on action (as described by for example Dewey, 1933 or Schon, 1983, 1987) as both involve the purposeful reconsideration of practice. We are arguing that "self", despite the literal translation of the term, is not necessarily a single isolated entity because learning through self-study can (and should) extend well beyond the individual. It is communicable and valuable to others' practice.

In 1993, a school-based professional development program (termed the "initial" program in this paper) that was the precursor to the longitudinal professional development program, was initiated with a school's science faculty in response to the teachers' concerns about the teaching and learning of

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science within the school (Loughran, 1994). The purpose of this initial program was to offer the teachers professional development opportunities on site, in ways that would be helpful for their practice. Therefore, the teachers invited a tertiary teacher educator (first author) to spend time in their classes and to work with them as they studied their own pedagogy. This was the first time that these staff had been purposefully observed whilst teaching since they were pre-service student-teachers. Clearly then, there was a major focus on their thoughts and actions and, in some form, the teachers understood this. However, added to this was the possibility that their students' learning could also be more closely observed (Loughran & Derry, 1995) and that reflection on both teaching and learning could become crucial to the overall professional development opportunities possible through this interaction.

Self-study of teaching in this initial program then was of two forms. The first was the self-study each individual teacher became engaged in (Derry & Loughran, 1994), the second was the "catalysed" self-study which was initiated through individual teacher's interaction with the first author and with teaching collegues. For the first author, self-study of research also had these same two broad components. These two aspects of self-study are the focus of this paper. We intend that this exploration will broaden the understanding of what self-study is (or might be) and how it can impact on teaching and research.

Self-study in teaching through the school-based professional development program

The collaborative involvement from the initial professional development program led to interesting teaching and learning outcomes in line with a common fundamental aim of self-study. After the first year with this school, a second school sought to be involved and to refine the approach for their own use. This subsequently occurred. It is the program in the second school that is the context for this paper. From a researcher's perspective, the array of opportunties to better understand "change" in the second school was so compelling that another researcher (second author) volunteered to be involved and offered new perspectives and methodologies for researching the developing process. Therefore

there is little doubt that reflection on practice was indeed an impetus for learning about both teaching and research, and that this was accentuated through the collaborative approach adopted for this project.

The second school is a large independent school in Melbourne. The school-based professional development program was initiated by the teachers in the science faculty, apparently because of their perceptions of the success of the program in the first school. They envisaged using a tertiary educator to work with them in their classes to help them better understand and develop their pedagogy. Therefore, the professional development would be at times and in places which were suitable to the teachers, rather than at another location at pre-determined times to suit the profesional development providers.

The following transcript[1] demonstrates the initial view of teacher participants in this program.

> Interviewer: What expectations did you have for the program?
>
> Teacher: I guess what I thought might happen would be that it would be started off with new ideas about how to do things that at the moment were a bit boring - boring's not the right word - but that sort of role. I thought that was a nice sort of thing, that we were actually discovering and thinking, "Hey what does this person do, can we improve it together?" And that has been really good because it used to be all of us sort of on our own, half way up a hill, and we were really each a branch on a tree and now we've all actually put out little sub branches and started to link up.

From the teachers' perspective the program was designed to respond to their needs as they sought feedback on their pedagogy from their own classroom interactions. This was obviously more practical

[1] The transcript extracts are from interviews conducted by the second author after the professional development program had run for 18 months. Further context for these interviews is given later in the paper. In all cases, the transcripts are illustrate the general or typical response of participants to the interview questions.

if the professional development was therefore on-site, but this structure required a number of important conditions. These conditions included:

1) Trust: The teachers were placing themselves in a position which they had not experienced since their days as student-teachers. They were inviting someone into their classes to observe and critique their teaching. This involved an element of risk which needed to be underpinned by a sense of trust such that they did not feel as though they were being judged, rather that they were working in a partnership on their teaching.

We believe that trust involves a number of elements in this situation. These are very similar to the elements noted by Mitchell (1992) in his work with school students as he attempted to encourage them to make changes in their approach to learning. In a similar vein to Mitchell, so too these teachers needed to believe that their ideas and approaches to teaching would be of interest to others and be considered as valuable and worthy contributions to the range of discussions resulting from inviting someone else into their classes. Therefore, in their own professional practice, there needed to be a trust that there would be intellectual respect for their thoughts and ideas and that they would genuinely be working in a collaborative manner. This is in sharp contrast with perceptions of a novice being informed of their faults and weaknesses by a perceived expert, as would very likely be the case in the absence of genuine trust.

In addition there also needed to be a trust that real problems, issues and concerns would be able to be adequately dealt with and resolved rather than raised, glossed over and perhaps forgotten. This expectation of working in a collaborative way and acknowledging the problematic nature of teaching relied on a genuine trust that as issues were raised that they would be seriously examined as they were important in the teacher's practice. This trust would not be possible if the "expert" were to totally control the direction of inquiry, perhaps losing sight of, or not acknowledging, the individual's needs.

2) Ongoing learning opportunities: The program needed to be capable of responding to the individual needs of the teachers as they arose. The daily concerns/issues which could so often be a

prompt for teachers to reflect on their teaching, but could so easily be overlooked due to a lack of time or collegial interaction, needed to be highlighted and raised so that the impetus for reflection was grasped. Clearly, this would be more likely to occur when another colleague was present and "on-hand" throughout a range of activities, both the special and the normal.

3) Challenge: The program needed to genuinenly challenge the participants' understanding of their practice and their students' learning. At the same time, and obiously, the challenge needed to be seen as a constructive approach to central issues: reviewing and/or better understanding classroom episodes; offering alternative views of shared experiences; offering teachers new ways to reconsider or reconstruct their understanding. Challenge could not mean extensive/destructive criticism of a teacher's practice or skills.

4) Independence: The program needed to operate in such a way as to respect each individual particpant's professional independence (and freedom) and to offer choices with respect to the extent of involvement and risk-taking associated with the teaching and learning approaches pursued. Diversity of learning outcomes rather than simple convergence toward prescribed outcomes needed to be encouraged and acknowledged as important through attention to individual needs.

5) Relationships: As an 'outsider', the first author needed to develop good working relationships with participants before embarking on prolonged collaborative ventures revolving around practices in teaching and learning. Yet within that, these relationships would obviously continue to be developed through the collegial aspect of the work. Hence there was the need for the 'outsider' to develop a 'knowing' about how to approach issues/concerns with these individuals in a productive manner, and for these teachers to develop a similar 'knowing' to allow collaborative work with each other and the 'outsider'.

6) Purpose: It was important for the teacher educator to make clear his intent so that the underlying purpose and nature of the involvement through classroom observation[2] was clear. This was based on the assertions that classroom observation involved an understanding that:

Developing trust precedes action.

Working with teachers as participants rather than directing them is crucial.

Recognition that collaboration involves a long term commitment.

Responsibility for the structures for development and change should be shared.

All work should be viewed as confidential between the individual teacher and the teacher educator unless teachers choose to raise it with others of their own accord.

Linking appropriate teaching strategies to content knowledge should be seen as central and as a basis from which the valuing of teachers' pedagogical content knowledge can be highlighted and better articulated.

Self-study of teaching as an individual venture

As all of the participants were willing voluteers it is likely that they were predisposed to reconsider their practice, and hence were primed to approach the program with a positive attitude toward self-study. With the program hinging so much on the need to work collaboratively and to build open and honest relationships it is not surprising that reflection on practice was an important basis for professional development.

[2] The process which was adopted for classroom observation involved a gradual build up of time and discussion with the teachers, and where appropriate the students, using the generalised timeline outlined below:

(1 - 2 weeks): positive feedback, perhaps offer alternative approaches to reach similar learning outcomes (develop trusting working relationship)

(2 - 3 weeks): during lessons teacher educator moves around the class during lessons probing/quizing students about their learning followed by post-teaching discussions of this with the teacher (offer students' views not the researcher's views)

(5 weeks): shared planning and debriefing, develop better understanding of teaching and learning experiences from which the process continues.

Before, during and after teaching, an individual's thoughts and actions were a prime focus for discussion as teaching and learning episodes were reviewed, recast and reconsidered. Consequently, the de-briefing interactions between individual teachers and the teacher educator became a shared form of self-study. This served to challenge the teacher's pedagogical reasoning as the learning from experience became more influential in the planning and delivery of teaching and learning episodes.

> Interviewer: How did you feel at the beginning about John being in the classroom with you while you were teaching?
>
> Teacher: I think because of his personality I think I was very comfortable. But I still felt that I better not just be here and do nothing, and I thought then that's really a bit superficial and I didn't like that. But then I thought well you can learn from what you're doing...I guess what he aimed to do was to get you think about it...you'd have to really clarify your own thinking and think about what you did, how you did it and why.

In this form then, self-study is indeed a valuable learning tool for the individual teacher as the learning from experience directly impacts on their own actions. However, it is of course self-study that is the consequence of a genuinely collaborative process involving an 'outsider' to the teaching context. It is the individual's teaching which forms the pivotal role in professional development and therefore invokes a greater commitment to carrying through the learning from self-study. This is also enhanced through the fact that the context of the situations and experiences is well known and understood by the participants and is continually being drawn from their own workplace.

Self study of teaching as a shared adventure

In addition to the observation process briefly outlined earlier (footnote 2), the science faculty as a whole were also responsibile for aspects of the professional development program that extended beyond the individual and to the group. These responsibilities included:

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1) The need for regular meetings (once every 2 - 3 weeks) in which teaching and learning issues were the only agenda items - no administration. This focus on teaching and learning issues is particularly important as the time for faculty meetings in schools is largely eroded by attention to organisational and structural details of running a faculty, rather than a concerted effort to discuss and reflect on teaching and learning. Therefore, raising the profile of teaching and learning and overtly deleting administration was a fundamental key to enhancing teachers' views, and corresponding attitudes, about the purpose and value of faculty meetings. Consequently, sessions were designed to model learning through the teaching experience (they could **not** adopt a "show and tell" approach) and to offer a challenge to existing views of teaching and learning.

2) Initially the teacher educator accepted responsibility for the input of teaching and learning ideas as a way of encouraging participants to try "one thing different" in their classes before the next meeting. Subsequent meetings then focussed on the theme: "What learning is associated with trying something different in our classes?"

3) A shift in responsibility for organising and conducting meetings from the teacher educator to the teachers occurred as individuals agreed to accept responsibility for introducing teaching and learning experiences from their own classes. Through this process, a range of approaches to probing the teachers' views about pedagogy and student learning were introduced.

4) The need to develop a shared vocabulary of teachers' professional knowledge so that the communication of ideas and the understanding of pedagogy might be enhanced and valued.

Through this "shared adventure" a number of developments occurred: teachers began to learn from and with one another; teachers began to take appropriate risks in the development of pedagogy; teachers began to reconsider individual and "faculty directed" practice. The ownership of the professional development program and associated responsibilities resided with the teachers, both individually and collectively. Self-study then clearly involved the science faculty as a form of "self"

and opened up opportunities for genuine growth in the collective wisdom and understanding of the teachers' practice and knowledge.

An example of how this collaborative self-study was embraced by the teachers was in the manner in which the second school sought to extend the program. They decided that they would like to assume total responsibility for the professional development program so that they might continue the learning benefits at the end of our two years together. Their desire to maintain this approach involved a substantial extra burden on top of their already busy teaching schedules. It meant that each teacher volunteered to give their time to learn about being the observer in their colleagues' classes. Therefore, these science teachers embarked on an extensive process to learn to assume the role of the teacher educator whom they had initially contracted, among other reasons, to work with them in ways which they did not really have time to do themselves.

The process of learning to assume the role initially held by the teacher educator involved:

1) pairing staff appropriately to observe one another's classes with the teacher educator, that is to be an observer jointly with the teacher educator (purpose: to help teachers develop observation and debriefing skills, and to learn to withhold judgment),

2) a transition of responsibility from the teacher educator to the pairs, that is from teacher and teacher educator as observer to teacher and second teacher as observer (purpose: to learn from and with one another),

3) pairs taking turns in organising and running Faculty meetings (purpose: to encourage staff to share their experiences and ideas and to accept greater responsiblity for so doing),

4) after an initial learning period, a time of re-grouping to broaden the range of teachers each individual collaborated with; some of these broadened contacts were influenced by the differing needs of individuals as well as the social/personal relationships of participants (purpose: to increase

participants' understanding of the diversity of needs amongst their colleagues and to increase their learning about withholding judgment through professional discourse).

5) development of a timetable for ongoing visits by the teacher educator, debriefing sessions and meetings (purpose: to help maintain the impetus for ongoing collaboration and to further devolve responsibility to the participants).

6) presentation to the whole school staff of the learning outcomes of involvement in the program (purpose: to demonstrate how professional development could be a genuine part of the teacher's workplace and to give participants an opportunity to share their experiences with colleagues outside their faculty).

This process added considerably to the self-study learning as teachers grasped the opportunities to develop skills in pedagogical reasoning and development which so often are deeply personal but are clearly enhanced through shared experiences. In most cases, the need to be capable of communicating and articulating much of the tacit knowledge of teaching with peers, and to be able to explore alternative approaches to similar classroom experiences, was a most powerful learning tool for participants.

Interviewer: Tell me about how he organised you to observe another teacher and talk with them, was that helpful?

Teacher: It was extremely helpful because a lot of the time John and I observed a teacher who John saw as very capable and very intuitive in his method of managing the kids and very good at getting the discussion going and...that was very helpful, unpacking what he was doing was of value.

Interviewer: Was that different to just sitting there [observing]?

Teacher: It was very useful to have him commentate for me on what he saw happening, he commented on what the teacher was doing, he was almost deliberately enigmatic, and the way he would talk to the students, they never took offence and they got used to him very quickly, it was very useful for me.

Self-study in researching the school-based professional development program

The dual role of teacher and researcher in this professional development program had many benefits. From a learning about teaching perspective, the opportunities for interaction and refining the skills of classroom observation, discussion and debriefing were considerable. This has had a direct bearing on the teacher educator's practice with his own student-teachers where similar practice is necessary during school practicum experiences. Beyond this though was the opportunity to research the development of teachers' pedagogies over time from a participant-observer's perspective and as a collaborative researcher.

With a research focus, the ability to be on-hand when the majority of the 'interventions' were occurring was a compelling aspect to this study. Also compelling was the obvious access to thoughts and actions which are often difficult to uncover, and more difficult to explore, if the researcher is not closely bound to the context of events. Therefore, there were a number of research questions able to be carefully examined throughout the professional development program. The thrust of these questions was the exploration of the change process whilst maintaining a perspective on the difference between perceptions of change and actions of change. The questions follow, grouped under themes:

1) Teachers: How do these science teachers view their own practice?
How do these science teachers approach their pedagogical develoment?
What conditions are helpful in encouraging these science teachers to reflect on their professional practice?

2) Learners: How do these students learn about science?

How do these students understand their teachers' teaching?

What conditions are helpful in encouraging these students to reflct on their approach to learning?

3) Change: What factors influence teachers'/students' perceived need for professional development/change?

How does change occur?

How can the gains from a professional development program be maintained over time?

We turn now to the issue of self-study of research which has been raised at a number of points in this paper. We will give our thoughts under two headings - self-study of research as an individual venture, and self-study of research as a shared adventure. That is, we will consider this issue in the same dual way as we have considered self-study of teaching.

Before we do this, we must address context. Just as it was appropriate and necessary to give relevant context of the longitudinal professional development program before discussing what we believe the program has told us about self-study of teaching, so we give relevant context for the subsequent discussion of self-study of research.

By choice, and now we suspect by habit, we work collaboratively. And we work in a University Faculty where at least in those areas of our general interests, genuine collaboration is very common across most staff. Collaboration, in teaching and research, has been present for many years. There is well established deep trust between collaborating staff. Collaboration is valued, it is fostered. (Most of these University staff also have strong commitments to collaborative approaches to professional development, but we do not dwell on that here).

It is in this collaborative context that the first author naturally talked informally (and with due recognition of confidentiality) with the second author and others from the outset of work in the first

school. This informed interaction, which we emphasize is bound in our professional context, was initially used by the first author to "talk his way" to a better understanding of the issues and potential actions in the professional development programs in both schools.

It is in this context of usual shared professional interests and concerns that we came to seriously explore the issue of self-study of research, and to do this in ways of important consequence with the previous discussion of self-study of teaching: individual and shared.

Self-study of research as an individual venture

Self-study of research as an individual venture is similar to that outlined earlier wih respect to teaching. Through the collaborative nature of the professional development program, reflection on action was continually encouraged. In a similar fashion, as the research questions developed, reflection on the methodology, developing hypotheses and assertions was common. Through the debriefing and other interactions, aspects of the research were continually being recast and reconsidered as ideas and propositions emerged though a greater understanding of the context.

For the individual researcher, learning from and through the program was enhanced by the close co-operation and involvement through the "usual" collaborative discussions and the shared analysis of the experiences from the professional development program and what these suggested about change (both fostering change and establishing the consequences of change into usual practice in the school). This collaboration was a prompt for individual reflection on the research. In this case, development took place in the context of long-standing and well established mutual trust and some of the developing notions of pedagogy and learning that emerged through the research were translated into the teacher educator's own pedagogy with his student-teachers at the University.

In essence then, this self-study of research context and the self-study of teaching context only differ on one essential point, but we believe it is a major difference: the second author was not sharing the first author's research experience in the way the teaching experience was shared with the teachers. This is perhaps because joint trust was already well established beforehand, therefore it was not as crucial for

the context to be explicitly shared because trust in the descriptions of what was happening in the research context already existed (i.e. acceptance on face value until there was good reason to challenge). It may well also have been signigicant that most of the staff were well known to the second author through other professional contact and interaction and therefore reinforced the existing trust associated with the "usual" collaboration of research.

So for the first author, self-study of the research context was continually prompted through the nature of the professional relationship with the second author as issues, concerns and ideas were discussed through a genuinely collaborative inquiry.

Self study of research as a shared adventure

Just as the self-study of teaching as a shared adventure required participants to accept joint responsibility for the professional development project, so the self-study of the research saw a shift in the locus of responsibility from the individual to the pair.

Through our collective thinking we began to develop a shared "ownership" (although we would argue that this shift was minor by comparison with the teachers) as our subsequent exploration of the teachers' perspectives was drawn from our discussions about the experiences and events arising through the professional development program. This culminated in the second author spending time in the school interviewing participants and asking questions which we had jointly developed. However, in this case many more of the questions every researcher knows they need to ask but understands they can not ask were able to be raised, hence more of the "cutting edge" of the research was able to be genuinely explored. We see this as an important issue because the sharing between us about the project (teaching and research) for a considerable period of time prior to the interviewing was much more substantial, and beneficial, than the not unknown practice of getting someone else to go and ask the "researcher's" questions. For these interviews, these were <u>our</u> questions, therefore the second author could genuinely run the interview in ways that had real links with the way the first author would have conducted the interviews if it were possible. In the other more usual case, this cannot be

done for as soon as the interviewer needs to leave the prepared interview protocol, the interview no longer has links to the orginial change agent.

This shared adventure in research is then important as the collaboration means that the second author is more directly a part of the project, but certainly different from the shared adventure in the self-study of teaching where the control of the project was deliberately handed over to the teachers. Therefore, there is a difference between the teaching and research arguments here in that the "shared" was stronger for longer (as the relationship and trust had been built up through collaborative practices over a longer period of time), and with different purposes.

This leads us to the current position where our shared adventure in research now allows us to develop our understanding of the change process within the school and to explore how this understanding might influence the structure and organisation of future professional development projects that aim to enhance teachers' opportunities for, and control of, collaborative approaches to "unpacking" the learning about pedagogy.

We have many pages of interview transcripts which we are together working on as we develop our knowledge of the pedagogical impact through this professional development program and extend our understanding of the change process associated with such a distinctive project.

Conclusion

In our introduction to this paper we noted our focus on two perspectives. These perspectives were phrased in a language of "can be". We argue that this paper supports a stronger position: (i) self-study **should** be both personal and collaborative, and (ii) self-study **should** be of teachering and of research. We continue to pursue both of these aspects of self-study in our work as teacher educators.

References

Derry, N. & Loughran, J.J. (1994). Electricity: the challenge of teaching for understanding. *Australian Science Teachers Journal 40* (3), 19 - 27.

Dewey, J. (1933). *How we think.* New York: Heath and Co.

Loughran, J.J. (1994). Professional development for science teachers: a school based approach. *Science Education International, 4* (4), 25 - 28.

Loughran, J.J., & Derry, N. (1995). *Researching teaching for understanding: the students' perspective.* A paper presented at the annual meeting of the American Educational Research Association, San Francisco April 1995

Mitchell, I.J. (1992). The Class Level, In Baird, J.R. and Northfield, J.R. (Eds). *Learning from the PEEL experience.* Melbourne: Monash University Printing Service.

Schon, D.A. (1983). *The Reflective Practitioner: How professionals think in action.* New York: Basic Books.

Schon, D.A. (1987). *Educating the Reflective Practitioner: Toward a new design fro teaching and learning in the professions.* San Francisco: Jossey-Bass.